

AMENDED CLAIMS

[(received by the International Bureau on 13 April 2004 (13.04.04);
original claims 1-17 replaced by new claims 1-18 (3 pages)]

1. A generic system architecture for use in forming automation systems, the generic system comprising a plurality of software agents selectively adaptable to implement specific functions used for the integration of information management, condition monitoring and real-time control in an automation system for a distributed industrial system formed thereby.

2. An architectural system as claimed in claim 1, which comprises a plurality of different types of software agents.

3. An architectural system as claimed in claim 2 which contains an ontology agent used to update and manage an ontology database.

4. An architectural system as claimed in claim 2 or 3, wherein at least some of the agents in the system are controlled and managed by agent platforms and local directories.

5. An architecture system as claimed in claim 2, 3 or 4, wherein said different types of agent include any of Information Retrieval Agents and Database Agents, and any of Device Agents and Plant Agents/Control Agents.

6. An architectural system as claimed in claim 1, 2, 3, 4 or 5, which includes one or more mobile agents.

7. An architectural system as claimed in claim 6, in which said mobile agent or agents each provide an additional communications mechanism between a user agent and one or more information providing agents.

8. An architectural system as claimed in any of claims 1 to 7 that has

an open standard architecture and defined protocols and interfaces, allowing integration of a variety of software and hardware.

9. An architectural system as claimed in any of claims 1 to 8, having system components which can be reconfigured dynamically.

10. A architectural system as claimed in any of claims 1 to 9 that has comprehensive HMIs and Web browser and provides real-time operator intervention.

11. An architectural system as claimed in any of claims 1 to 10 that allows connections of mobile servers.

12. An architectural system as claimed in any of claims 1 to 11 adapted to embed user applications of information management, condition monitoring and real-time control flexibly.

13. An architectural system as claimed in any of claims 1 to 11, adapted to enable the adding of intelligent behaviour using different agent models.

14. An architectural system as claimed in any of claims 1 to 13 adapted to provide an integration of information management, condition monitoring and real-time control functions for various devices distributed over LANs and WAN.

15. An architectural system as claimed in any of claims 1 to 14, adapted to handle different types of tasks in different time scales required for the information management, condition monitoring and real-time control of large scale distributed industrial systems.

16. An architectural system as claimed in any of claims 1 to 15,

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adapted to enable the use of commercial real-time application platforms as HMIs.

17. An automation system formed using a generic architectural system as claimed in any of claims 1 to 16.

18. An automation system for a distributed industrial system, comprising a plurality of software agents adapted to implement specific functions used for information management, condition monitoring and real-time control in a co-ordinated manner.